UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,778	02/13/2002	Ajay Mohindra	YO998-210X	4104

			EXAMINER

7590   11/17/2006

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EXAMINER
NEURAUTER, GEORGE C

ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 11/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 August 2006*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11-18 and 20-22* is/are pending in the application.

  4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-18 and 20-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a)☐ All b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
  Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Claims 11-18 and 20-22 are currently presented and have been examined.

In view of the appeal brief filed on 17 August 2006, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below.

It is noted for the record that the Examiner maintains the views previously presented regarding the Examiner's interpretation of the claims.

Claim Interpretation

The element "bag buffer" defined on page 8, lines 20-23 of the specification and recited in claims 11-17 and 19-22 will be given its broadest reasonable interpretation and will be interpreted by the Examiner as a buffer that holds predetermined variable/value pairs that is consistent with the disclosures of the specification and the interpretation that those skilled in the art would reach. See MPEP § 2111.

The Applicant has not provided a clear definition for the terms "variable" or "value" recited in claims 11-22 within the specification. Therefore, the Examiner will interpret this element by its plain meaning as if the term was interpreted by one of ordinary skill in the art. See MPEP § 2111.01.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 18 and 20-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

MPEP 2106 states:

"Data structures not claimed as embodied in computer-readable media are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer. See, e.g., *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized."

Claims 18 and 20-22 recite a data structure *per se* and, therefore, are directed to non-statutory subject matter.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 11-13 and 18-19 are rejected under 35 U.S.C. 102(b)

as being anticipated by "Iterant Agents for Mobile Computing" by

Chess et al.

Regarding claim 11, Chess discloses a method for enabling a

user to provide input values ("user's task") as variables to a

running program (referred to throughout the reference as

"iterant agent" or "Transaction Agent") after said program has

begun running and before the program needs the input values,

wherein user input values are substituted for program variables

during program execution, comprising the steps of maintaining a

bag buffer of variable/value pairs for use in executing the

program in the program (page 34, right column, specifically "The

agent is initialized with the user's task..."; page 39,

paragraph "Goals and Status Information"; see also Figure 2);

receiving a communication, including input values, from the user

during program execution (page 36, right column, specifically

"He uses a form or a dialogue to state his need"); and

temporarily storing said input values for said variables as

variable/value pairs in said bag buffer (page 34, right column,

specifically "The agent is initialized with the user's task...";

page 36, right column, specifically "This task specification is

used to create an instance of a Transaction Agent...The

Transaction Agent is also given the user's preferences for travel reservations (expressed as rules)...").

Regarding claim 12, Chess discloses the method of claim 11 wherein said program subsequently performs a retrieving step wherein said program searches through contents of the bag buffer to locate needed input values before requesting input from said user. (page 37, left column, specifically "The agent...process[es] each of [the] candidates against the user's travel preferences...")

Regarding claim 13, Chess discloses the method of claim 12, wherein the retrieving step comprises the steps of searching, in the bag buffer, for input values associated with input variables requested by said program (page 37, left column, specifically "The agent...process[es] each of [the] candidates against the user's travel preferences...");

updating, if found, the input variables with the input values (page 37, right column, specifically "After ordering the candidates according to preference...");

disposing, in an input buffer, the input variables, if not found (page 37, right column, specifically "Whenever it finds a better candidate, it sends a message back to the server where it found the previous selection, releasing the hold it had requested. When it has examined a minimum number of

candidates...it returns to the server the best candidate...");

and

optionally notifying the user via electronic means if no

suitable values are found in the bag buffer (page 47, left

column, specifically the text "Because the client may not be

connected when the agent's response is ready...the agent can

make use of the Agent Status Services to indicate its status and

await an indication from its client. Or it can alert the user by

using the services of the predetermined AMP to send a "page" to

the client").

Regarding claim 18, Chess discloses a computer program data

structure for a mobile agent ("iterant agent" or "Transaction

Agent"; Figure 2) executing a program at an agent execution

shell at a computing location comprising:

an output buffer for storing program execution output

values to be displayed to a user; (page 36, left column, the

paragraph "An Information Dispersal/Retrieval Model,

specifically "A client sends its agent...into the network to

retrieve the latest version of a technical paper on "Agent

Technologies"...In this case, the iterant agent serves as the

courier...for data and program content")

an input buffer for storing values based on user input of

values for variables required by said program, wherein user

input values are substituted for program variables during

program execution, said input buffer being accessed by said

agent execution shell to communicate values for the input

variables to the agent for present user by the agent during

program execution (page 34, right column, specifically "The

agent is initialized with the user's task..."; page 36, right

column, specifically "He uses a form or a dialogue to state his

need...This task specification is used to create an instance of

a Transaction Agent...The Transaction Agent is also given the

user's preferences for travel reservations (expressed as

rules)...");

a program state buffer for storing at least the present

state of said program. (page 35, left column, specifically "When

the agent has successfully completed its task at this server, it

may collect its state..."); and

a bag buffer for storing variable/value pairs for later use

by said agent in executing said program. (page 34, right column,

specifically "The agent is initialized with the user's task...";

page 39, paragraph "Goals and Status Information")

Claim 11 is rejected under 35 U.S.C. 102(e) as being

anticipated by US Patent 5,901,287 to Bull et al.

Regarding claim 11, Bull discloses a method for enabling a

user to provide input values as variables to a running program

after said program has begun running and before the program

needs the input values, wherein user input values are

substituted for program variables during program execution,

comprising the steps of:

maintaining a bag buffer of variable/value pairs

("DataStore") for use in executing the program in the program;

receiving a communication, including input values ("criteria" or

"explicit or implicit query parameters"), from the user during

program execution; and temporarily storing said input values for

said variables as variable/value pairs in said bag buffer.

(column 5, lines 46-55, specifically "The user can establish a

persistent...agent to monitor future information additions to

the System"; see also column 8, lines 32-36 and column 10, lines

64-67)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which

forms the basis for all obviousness rejections set forth in this

Office action:

> (a) A patent may not be obtained though the invention is not identically
> disclosed or described as set forth in section 102 of this title, if the
> differences between the subject matter sought to be patented and the prior
> art are such that the subject matter as a whole would have been obvious at
> the time the invention was made to a person having ordinary skill in the
> art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere*
Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for
establishing a background for determining obviousness under 35
U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and
     the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent
     art.
4.   Considering objective evidence present in the
     application indicating obviousness or nonobviousness.

This application currently names joint inventors. In
considering patentability of the claims under 35 U.S.C. 103(a),
the examiner presumes that the subject matter of the various
claims was commonly owned at the time any inventions covered
therein were made absent any evidence to the contrary.
Applicant is advised of the obligation under 37 CFR 1.56 to
point out the inventor and invention dates of each claim that
was not commonly owned at the time a later invention was made in
order for the examiner to consider the applicability of 35
U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior
art under 35 U.S.C. 103(a).

Claims 14-17 and 20-22 rejected under 35 U.S.C. 103(a) as
being unpatentable over Chess et al.

Regarding claims 14-17, Chess discloses the method of Claim
13.

Chess does not expressly disclose wherein the electronic

means is a pager, beeper, electronic mail, or smart telephone,

wherein the notifying comprises assembling and transmitting a

message to said user, however, Bull does disclose these

limitations (column 5, lines 46-60, specifically lines 51-55;

see also column 3, lines 26-29, column 10, lines 22-31, and

column 11, lines 53-57)

It would have been obvious to one of ordinary skill in the

art at the time the invention was made to combine the teachings

of these references since Bull discloses that notifying by these

various electronic means allows the user to be alerted to any

future information addition to the system (column 5, lines 50-

55). In view of these specific advantages and that the

references are directed to allowing a user to provide input

values to program before it requires the values, one of ordinary

skill would have been motivated to combine these references and

would have considered them to be analogous to one another based

on their related fields of endeavor, which would lead one of

ordinary skill to reasonably expect a successful combination of

the teachings.

Regarding claims 20-22, Chess discloses the data structure

of Claim 19.

Chess does not expressly disclose wherein the bag buffer is an array data structure, hash table data structure, or a tuple space data structure.

Examiner takes Official Notice (see MPEP § 2144.03) that using a specific data structure such as an array, hash table, or tuple space in place of any other type of data structure was well known in the art at the time the invention was made. The Applicant is entitled to traverse any/all official notice taken in this action according to MPEP § 2144.03, namely, "if applicant traverses such an assertion, the examiner should cite a reference in support of his or her position". However, MPEP § 2144.03 further states "See also *In re Boon*, 439 F.2d 724, 169 USPQ 231 (CCPA 1971) (a challenge to the taking of judicial notice must contain adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice)." Specifically, *In re Boon*, 169 USPQ 231, 234 states "as we held in *Ahlert*, an applicant must be given the opportunity to challenge either the correctness of the fact asserted or the notoriety or repute of the reference cited in support of the assertion. We did not mean to imply by this statement that a bald challenge, with nothing more, would be all that was needed". Further note that 37 CFR § 1.671(c)(3) states "Judicial notice means official notice". Thus, a traversal by

the Applicant that is merely "a bald challenge, with nothing

more" will be given very little weight.

Therefore, one of ordinary skill in the art would have been

motivated to modify the teachings of Chess to include the well

known subject matter in the art to achieve the claimed invention

since the well known subject matter was well within the level of

knowledge and skill of one or ordinary skill and would have

reasonably suggested, given this knowledge, that, in view of the

teachings of Chess, it would been obvious to achieve the

limitations of the claim.

Conclusion

It is noted that the column, line, and/or page number

citations used in the prior art references as applied by the

Examiner to the claimed invention are for the convenience of the

Applicant to represent the relevant teachings of the prior art.

The prior art references may contain further teachings and/or

suggestions that may further distinguish the citations applied

to the claims, therefore, the Applicant should consider the

entirety of these prior art references during the process of

responding to this Office Action. It is further noted that any

alternative and nonpreferred embodiments as taught and/or

suggested within the prior art references also constitute prior

art and the prior art references may be relied upon for all the

teachings would have reasonably suggested to one of ordinary skill in the art. See MPEP 2123.

The prior art listed in the PTO-892 form included with this Office Action disclose methods, systems, and apparatus similar to those claimed and recited in the specification. The Examiner has cited these references to evidence the level and/or knowledge of one of ordinary skill in the art at the time the invention was made, to provide support for universal facts and the technical reasoning for the rejections made in this Office Action including the Examiner's broadest reasonable interpretation of the claims as required by MPEP 2111 and to evidence the plain meaning of any terms not defined in the specification that are interpreted by the Examiner in accordance with MPEP 2111.01. The Applicant should consider these cited references when preparing a response to this Office Action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George C. Neurauter, Jr. whose telephone number is 571-272-3918. The examiner can normally be reached on Monday-Friday 10am-6:30pm.
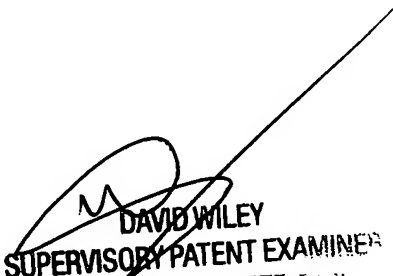
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley, can be reached on 571-272-3923. The fax phone number for the

organization where this application or proceeding is assigned is
571-273-8300.

Information regarding the status of an application may be
obtained from the Patent Application Information Retrieval
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access to the automated information system, call 800-786-9199
(IN USA OR CANADA) or 571-272-1000.

gcn

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